#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization

International Bureau



## 

# (43) International Publication Date 28 April 2005 (28.04.2005)

#### **PCT**

# (10) International Publication Number WO 2005/037440 A1

(51) International Patent Classification<sup>7</sup>: 1/28, G01N 33/553

B03C 1/00,

(21) International Application Number:

PCT/IB2004/003432

(22) International Filing Date: 20 October 2004 (20.10.2004)

(25) Filing Language:

Finnish

(26) Publication Language:

English

(30) Priority Data:

20031535

20 October 2003 (20.10.2003) FI

20040159

2 February 2004 (02.02.2004) FI

(71) Applicant (for all designated States except US): BIO-NO-BILE OY [FI/FI]; Tykistökatu 4 B, FIN-20520 Turku (FI).

(72) Inventors; and

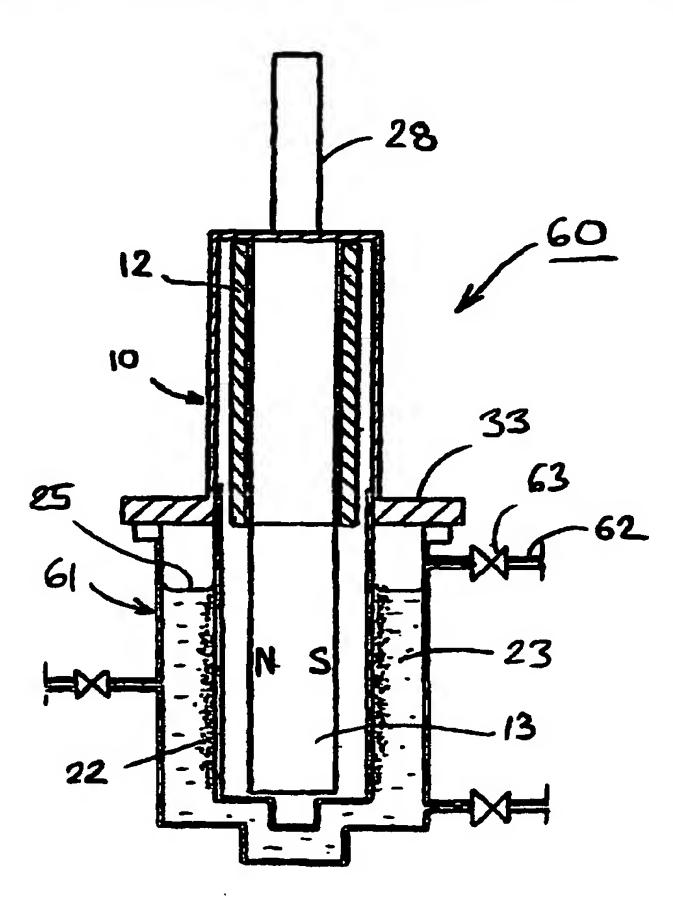
(75) Inventors/Applicants (for US only): KORPELA, Matti

[FI/FI]; Maijamäentie 13, FIN-21100 Naantali (FI). RUNDT, Kenneth [FI/FI]; Myllymäentie 18, FIN-20810 Turku (FI).

- (74) Agent: PATENTTITOIMISTO KARI PIRHONEN OY; P.O. Box 71, FIN-20101 Turku (FI).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: MAGNETIC ENRICHMENT METHOD, A REACTOR UNIT FOR MICRO PARTICLES AND A MAGNET UNIT



(57) Abstract: Magnetic enrichment method, wherein the desired biological component is collected from a solution, which component is thereafter enriched in a liquid in such a manner that by means of the micro particles attached to the magnet or attached by means of at least one magnet at least one biological component is collected in a closed reactor vessel. Thereafter at least one biological component is enriched in such a manner that the desired component is released to the solution. The reactor unit is a closed vessel, wherein the prevailing conditions are controllable. The shape and the location of the magnet unit in the reactor unit are adjusted in a preferable manner to collect the desired biological component.

### WO 2005/037440 A1



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

— with international search report

with amended claims

Date of publication of the amended claims:

16 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.